

WE CLAIM AS OUR INVENTION:

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a' 1. A pinless composite masonry block comprising a front surface and a back surface adjoined by first and second side surfaces, a top surface and a bottom surface
5 each lying adjacent said front, back, and first and second side surfaces,

each of said side surfaces having an inset spanning from said block top surface to said block bottom surface,

10 said block top surface comprising one or more protrusions positioned adjacent said first and second inset on said block top surface,

said block back surface comprising first and second legs, said first leg extending from the wall
15 back surface beyond the plane of said block first side surface and said second leg extending from the wall back surface beyond the plane of said block second side surface wherein said first and second legs angle
towards said block front surface.

20 ~~2. The block of claim 1 wherein said block has an open central portion extending from said top surface to said bottom surface.~~

3. The block of claim 1 wherein said block front surface is substantially planar.

25 4. The block of claim 1 wherein said block front surface ~~is faceted.~~

5. The block of claim 1 wherein said block front surface is outwardly curving.

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a2 5 6. The block of claim 1 wherein said block protrusions comprises first and second oblong sections between which is positioned a joining section, said joining section having a narrower width than either of said first and second oblong sections.

7. The block of claim 8 wherein said insets extend from about 1 inch to 4 inches into the center portion of the block.

8. A retaining wall structure, said retaining wall structure comprising one or more courses, each of said courses comprising one or more composite masonry blocks, each of said composite masonry blocks comprising a front surface and a back surface adjoined by first and second side surfaces, a top surface and a bottom surface each lying adjacent said front, back and first and second side surfaces,

each of said side surfaces having an inset spanning from said block top surface to said block bottom surface,

said block top surface comprising a protrusion positioned adjacent said first and second inset on said block top surface,

said block back surface comprising first and second legs, said first legs extending from the wall

back surface beyond the plane of said block first side surface and said second leg extending from the wall back surface beyond the plane of said block second side surface wherein said first and second legs angle towards said block front surface.

9. The retaining structure of claim 8 wherein said structure comprises at least two courses wherein the blocks of said upper course comprise insets which are seated on the protrusions of the block of said lower course.

10 ~~10. The structure of claim 9 wherein said retaining structure comprises a supporting matrix positioned between adjacent blocks of said upper and lower courses.~~

11. The retaining structure of claim 9 wherein the blocks of said upper course are smaller when measured from front to back than the blocks of said lower course.

12. The structure of claim 10 wherein said supporting matrix comprises tie backs positioned between the blocks of said upper and lower courses.

13. The structure of claim 11 wherein said supporting matrix comprises a continuous webbing positioned between the blocks of said upper and lower courses.

14. The structure of claim 9 wherein said wall is substantially vertical.

15. The structure of claim 9 wherein said wall sets back at an angle in relationship to the ground.

16. A block mold assembly comprising:

(a) a stripper shoe, said stripper shoe having a top side and a bottom side, said shoe bottom side having one or more depressions, said shoe top side comprising one or more heating element positioned over said shoe bottom side depressions; and

(b) a block mold having a central opening and shaped to receive said stripper shoe, said mold having a front, back, and first and second sides.

17. The mold assembly of claim 16, comprising a heat shroud affixed to said shoe, said heat shroud configured to contain said heating element.

18. The mold assembly of claim 16, comprising a head affixed to said heat shroud.

19. A method of using a block mold assembly, said block mold assembly comprising:

(a) a stripper shoe, said stripper shoe having a top side and a bottom side, said shoe bottom side having one or more depressions, said shoe top side comprising one or more heating element positioned over said shoe bottom side depressions; and

(b) a block mold having a central opening and shaped to receive said stripper shoe, said mold having a front, back, and first and second sides, said method comprising the steps of:

(i) loading said mold with block mix;

(ii) compressing the block mix with said shoe; and

(iii) stripping the block from the mold with said shoe.

5 ~~20. A block resulting from the method of claim 26.~~

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A 3 7 ~~21. A method of building a retaining structure, said~~
structure comprising at least two courses, each of said
courses comprising one or more composite masonry blocks,
each of said blocks comprising a front surface and a back
10 surface adjoined by first and second side surfaces, a top
surface and a bottom surface each lying adjacent said
front, back and first and second side surfaces, wherein the
blocks of said upper course are smaller in dimension when
measured from said front surface to said back surface than
15 the blocks of said lower course, said method comprising the
step of laying each of said courses to form said retaining
structure.

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